

ABSTRACT

*SA* Multi-memory electronic identification tags are utilized in short-range cooperative electronic identification systems for the 5 identification of a variety of objects. Such systems are comprised of readers and tags wherein a reader in the proximity of a tag may communicate with the tag in accordance with a specified process if the tag belongs to a certain class of tags. Tags are intended to be implanted within living tissue or concealed beneath the surface 10 of inanimate objects. Communication between tag and reader is accomplished by a reader establishing a reversing magnetic field in the vicinity of a tag and the tag varying its absorption of power from the field in accordance with the information to be transmitted. The multi-memory tag utilizes three types of memory 15 for the storage of data to be transmitted to an interrogating reader. The first type of memory is both permanent and unalterable and is used for storing data that is unique to the tag and never needs to be changed. The second type of memory is permanent but also alterable and is used for storing data that characterizes the 20 object to which the tag is attached. The data stored in this second type of memory is altered by means of a separate memory programming unit which communicates with a tag by means of a reversing magnetic field that is modulated in accordance with the new data. The third type of memory is for the temporary storage 25 of data produced by tag sensors. *EA*